For receiving Office use only **PCT** International Application No. **REQUEST** International Filing Date The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty. Name of receiving Office and "PCT International Application" Applicant's or agent's file reference (if desired) (12 characters maximum) SMC 60634/WO Box No. 1 TITLE OF INVENTION **Process** Box No. II **APPLICANT** This person is also inventor Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Telephone No. +44 161 740 1460 Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.) Facsimile No. **Avecia Limited** +44 161 795 6005 Hexagon House, Blackley Teleprinter No. Manchester M9 8ZS **United Kingdom** Applicant's registration No. with the Office State (that is, country) of nationality: State (that is, country) of residence: GB GB This person is applicant all designated all designated States except the United States the States indicated in for the purposes of: the United States of America States the Supplemental Box of America only Box No. III **FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)** Name and address: (Family name followed by given name; for a legal entity, full official designation. This person is: The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.) applicant only O'DONNELL, John applicant and inventor PO Box 42, Hexagon House, Blackley inventor only (If this check-box is marked, do not fill in below.) Manchester M9 8ZS **United Kingdom** Applicant's registration No. with the Office State (that is, country) of nationality: State (that is, country) of residence: GB **GB** This person is applicant all designated States except the United States of America the States indicated in the Supplemental Box all designated the United States for the purposes of: States of America only Further applicants and/or (further) inventors are indicated on a continuation sheet. AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE Box No. IV The person identified below is hereby/has been appointed to act on behalf common agent of the applicant(s) before the competent International Authorities as: representative Name and address: (Family name followed by given name; for a legal entity, full official designation. Telephone No. The address must include postal code and name of country.) +44 161 721 1794 MAYALL, John Facsimile No. +44 161 721 5801 Avecia Limited, Intellectual Property Group, PO Box 42 Teleprinter No. Hexagon House, Blackley, Manchester M9 8ZS United Kingdom

Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the

space above is used instead to indicate a special address to which correspondence should be sent.

Form PCT/RO/101 (first sheet) (January 2004)

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See Notes to the request form

Agent's registration No. with the Office

| Continuation of Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S) | | | | |
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| If none of the following sub-boxes is used, this sheet should no | ot be included in the request. | | | |
| Name and address: (Family name followed by given name; for a legal enti- The address must include postal code and name of country. The country of the Box is the applicant's State (that is, country) of residence if no State of residen | he address indicated in this | | | |
| YEATES, Stephen George | applicant only | | | |
| 7 Fowey Close, Broken Cross Macclesfield, Cheshire, SK10 3PU | applicant and inventor inventor only (If this check-box is marked, do not fill in below.) | | | |
| United Kingdom | Applicant's registration No. with the Office | | | |
| State (that is, country) of nationality: GB | State (that is, country) of residence: GB | | | |
| This person is applicant all designated all designated for the purposes of: all designated the United States | States except the United States the States indicated in the Supplemental Box | | | |
| Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant 's State (that is, country) of residence if no State of residence is indicated below.) A NAME OF THE STATE OF THE ST | | | | |
| ANNABLE, Tom PO Box 42, Hexagon House, Blackley Manchester M9 8ZS | applicant and inventor inventor only (If this check-box is marked do not fill in below) | | | |
| United Kingdom | is marked, do not fill in below.) Applicant's registration No. with the Office | | | |
| State (that is, country) of nationality: GB | State (that is, country) of residence: GB | | | |
| This person is applicant for the purposes of: all designated states all designated the United States | States except the United States the States indicated in | | | |
| Name and address: (Family name followed by given name; for a legal entity, The address must include postal code and name of country. The country of the Box is the applicant's State (that is, country) of residence if no State of residence | address indicated in this | | | |
| State (that is, country) of nationality: | State (that is, country) of residence: | | | |
| This person is applicant all designated all designated States all designated States all designated States | tates except sof America only the States indicated in the Supplemental Box | | | |
| Name and address: (Family name followed by given name; for a legal entity, f The address must include postal code and name of country. The country of the a Box is the applicant's State (that is, country) of residence if no State of residence is | applicant only applicant and inventor inventor only (If this check-box is marked, do not fill in below.) | | | |
| | Applicant's registration No. with the Office | | | |
| | tate (that is, country) of residence: | | | |
| This person is applicant all designated all designated States except the United States the States indicated in the Purposes of: all designated States except of America only the States indicated in the Supplemental Box | | | | |
| Further applicants and/or (further) inventors are indicated on another continuation sheet. | | | | |

Supplemental Box

If the Supplemental Box is not used, this sheet should not be included in the request.

- 1. If, in any of the Boxes, except Boxes Nos. VIII(i) to (v) for which a special continuation box is provided, the space is insufficient to furnish all the information: in such case, write "Continuation of Box No...." (indicate the number of the Box) and furnish the information in the same manner as required according to the captions of the Box in which the space was insufficient, in particular:
- (i) if more than two persons are to be indicated as applicants and/or inventors and no "continuation sheet" is available: in such case, write "Continuation of Box No. III" and indicate for each additional person the same type of information as required in Box No. III. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below;
- (ii) if, in Box No. II or in any of the sub-boxes of Box No. III, the indication "the States indicated in the Supplemental Box" is checked: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the applicant(s) involved and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is applicant;
- (iii) if, in Box No. II or in any of the sub-boxes of Box No. III, the inventor or the inventor/applicant is not inventor for the purposes of all designated States or for the purposes of the United States of America: in such case, write "Continuation of Box No. II" or "Continuation of Box No. II" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the inventor(s) and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is inventor;
- (iv) if, in addition to the agent(s) indicated in Box No. IV, there are further agents: in such case, write "Continuation of Box No. IV" and indicate for each further agent the same type of information as required in Box No. IV;
- (v) if, in Box No. VI, there are more than three earlier applications whose priority is claimed: in such case, write "Continuation of Box No. VI" and indicate for each additional earlier application the same type of information as required in Box No. VI.
- 2. If the applicant intends to make an indication of the wish that the international application be treated, in certain designated States, as an application for a patent of addition, certificate of addition, inventor's certificate of addition or utility certificate of addition: in such a case, write the name or two-letter code of each designated State concerned and the indication "patent of addition," "certificate of addition," "inventor's certificate of addition," the number of the parent application or parent patent or other parent grant and the date of grant of the parent application (Rules 4.11(a)(iii) and 49bis.1(a) or (b)).
- 3. If the applicant intends to make an indication of the wish that the international application be treated, in the United States of America, as a continuation or continuation-in-part of an earlier application: in such a case, write "United States of America" or "US" and the indication "continuation" or "continuation-in-part" and the number and the filing date of the parent application (Rules 4.11(a)(iv) and 49bis.1(d)).

Continuation of Box IV

GAIRNS, Raymond Stevenson MORPETH, Fraser Forrest PARLETT, Peter Michael REVELL, Christopher SCHMITT, Maja SHELLER, Alan TEASDALE, Nicola Joanne

All of Intellectual Property Group, Avecia Limited, PO Box 42, Hexagon House, Blackley, Manchester M9 8ZS, United Kingdom

Sheet No.

| Box No. V DESIGNA | ATIONS | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|----------------------------------------|---------------------------------------------|--|--|
| The filing of this request constitutes under Rule 4.9(a), the designation of all Contracting States bound by the PCT on the internation filing date, for the grant of every kind of protection available and, where applicable, for the grant of both regional and national patent | | | | | | |
| However, | | | | | | |
| DE Germany is not designated for any kind of national protection | | | | | | |
| KR Republic of Korea is not designated for any kind of national protection | | | | | | |
| RU Russian Federat | RU Russian Federation is not designated for any kind of national protection | | | | | |
| the national law, of an ear | ay be used to exclude (irrevocat lier national application from w ons in these and certain other S | vhich priority is claimed. S | | | | |
| Box No. VI PRIORIT | Y CLAIM | | | | | |
| The priority of the following | ng earlier application(s) is here | by claimed: | . | | | |
| Filing date | Number | Τ | Where earlier application is: | | | |
| of earlier application (day/month/year) | of earlier application | national application: country or Member of WTO | regional application:* regional Office | international application: receiving Office | | |
| item (1) 06/12/2003 6 December 2003 | 0328320.7 | GB | | | | |
| item (2) 10/12/2003 10 December 2003 | 0328573.1 | GB | | | | |
| item (3) 09/06/2004 9 June 2004 | 0412831.0 | GB | | | | |
| Further priority claims | are indicated in the Supplemen | ntal Box. | , | | | |
| The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of this international application is the receiving Office) identified above as: | | | | | | |
| all items it | tem (1) | item (3) | other, see | e Supplemental Box | | |
| * Where the earlier application is an ARIPO application, indicate at least one country party to the Paris Convention for the Protection of Industrial Property or one Member of the World Trade Organization for which that earlier application was filed (Rule 4.10(b)(ii)): | | | | | | |
| · · · · · · · · · · · · · · · · · · · | ······································ | | | | | |
| Box No. VII INTERNAT | ΓΙΟΝAL SEARCHING AUT | HORITY | | | | |
| Choice of International Se | arching Authority (ISA) (if two- | vo or more International Sec | arching Authorities are co | ompetent to carry out the | | |
| ISA / EP | | | | | | |
| Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority): | | | | | | |
| Date (day/month/year) | Numbe | er Country | y (or regional Office) | | | |
| Box No. VIII DECLARA | TIONS | | | | | |
| The following declarations are contained in Boxes Nos. VIII (i) to (v) (mark the applicable Check-boxes below and indicate in the right column the number of each type of declaration): Number of declarations | | | | | | |
| Box No. VIII (i) | Box No. VIII (i) Declaration as to the identity of the inventor : | | | : | | |
| Box No. VIII (ii) | Box No. VIII (ii) Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent : | | | : | | |
| Box No. VIII (iii) Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application : | | | : | | | |
| Box No. VIII (iv) Declaration of inventorship (only for the purposes of the designation of the United States of America): | | | | | | |
| Box No. VIII (v) Declaration as to non-prejudicial disclosures or exceptions to lack of novelty: | | | : | | | |

| Box No. IX CHECK LIST; LANGUAGE OF FILING | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--|--|
| This international application contains: (a) in paper form, the following number of sheets: request (including | This international application is accompanied by the following item(s) (mark the applicable check-boxes below and indicate in right column the number of each item): 1. fee calculation sheet | Numb of iter | | |
| declaration sheets) : 5 description (excluding | 2. Conginal separate power of attorney | : | | |
| sequence listing and/or | 3. original general power of attorney | : | | |
| tables related thereto) : 25 | if one | | | |
| claims : 3 abstract : 1 | 5. Statement explaining lack of signature | • | | |
| drawings | 6. priority document(s) identified in Box No. VI as | • | | |
| Sub-Asadau de Cala | _ (item(s): | : | | |
| sequence listing : 34 | i dansiation of international application into | | | |
| tables related thereto : | 8. Separate indications concerning deposited microorganism | : | | |
| (for both, actual number of sheets if filed in paper form, | or other biological material | • | | |
| whether or not also filed in | 9. sequence listing in computer readable form | | | |
| computer readable form; see (c) below) | (indicate type and number of carriers) (i) □ copy submitted for the purposes of international search under | | | |
| Total number of sheets : 34 | Rule 13ter only (and not as part of the international application | n) : | | |
| | (ii) (only where check-box (b)(i) or (c)(i) is marked in left column) additional copies including, where applicable, the copy for the | | | |
| (b) only in computer readable form (Section 801(a)(i)) | purposes of international search under Rule 13ter | • | | |
| (i) sequence listing | (iii) together with relevant statement as to the identity of the copy o |) T | | |
| (ii) tables related thereto | copies with the sequence listing mentioned in left column 10. tables in computer readable form related to sequence listing | : | | |
| (c) also in computer readable form (Section 801(a)(ii)) | (indicate type and number of carriers) | | | |
| (i) ☐ sequence listing(ii) ☐ tables related thereto | (i) Copy submitted for the purposes of international search under Section 802(b-quater) only (and not as part of the international application) | | | |
| Type and number of carriers (diskette, CD-ROM, CD-R or other) on which are | (ii) (only where check-box (b)(ii) or (c)(ii) is marked in left column) | : | | |
| contained the | additional copies including, where applicable, the copy for the purposes of international search under Section 802(b-quater) | • | | |
| sequence listing: | (iii) together with relevant statement as to the identity of the copy or | • | | |
| additional copies to be indicated under | copies with the tables mentioned in left column 11. other (specify): .UKPQ Form 23/77. | • | | |
| items 9(ii) and/or 10(ii), in right column) | | : | | |
| Figure of the drawings which | Language of filing of the | | | |
| should accompany the abstract: | international application: | | | |
| Box No. X SIGNATURE OF APPLICAN Next to each signature, indicate the name of the person sign | T, AGENT OR COMMON REPRESENTATIVE ning and the capacity in which the person signs (if such capacity is not obvious from reading the | ne request). | | |
| For and on behalf of | | | | |
| Avecia Limited - O'DONNELL, J., YEATES, S.G. & ANNABLE, T. | | | | |
| AMI | | | | |
| MAYALL, John Alland | | | | |
| WATALL, John | | | | |
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| l. Date of actual receipt of the purported | 2. Drawing | ac. | | |
| international application: | Z. Diawing | gs. | | |
| Corrected date of actual receipt due to later but timely received papers or drawings completing | | | | |
| the purported international application: | | | | |
| Date of timely receipt of the required corrections under PCT Article 11(2): | | | | |
| International Searching Authority (if two or more are competent): ISA/ 6. Transmittal of search copy delayed until search fee is paid | | | | |
| For International Bureau use only | | | | |
| Date of receipt of the record copy by the International Bureau: | | | | |
| | | J | | |

This sheet is not part of and does not count as a sheet of the international application.

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--|--|
| FEE CALCULATION SHEET Annex to the Request | International Application No. | | |
| Applicant's or agent's file reference SMC 60634/WO | Date stamp of the receiving Office | | |
| Applicant Avecia Limited | | | |
| CALCULATION OF PRESCRIBED FEES | | | |
| 1. TRANSMITTAL FEE | £55 T | | |
| 2. SEARCH FEE | £1078 S | | |
| (If two or more International Searching Authorities are competent international search, indicate the name of the Authority which is cather international search.) | to carry out the hosen to carry out | | |
| 3. INTERNATIONAL FILING FEE | | | |
| Where items (b) and/or (c) of Box No. IX apply, enter Sub-total num Where items (b) and (c) of Box No. IX do not apply, enter Total num | nber of sheets } | | |
| il first 30 sheets | £628 i1 | | |
| number of sheets in excess of 30 x £7 = | £28 i2 | | |
| additional component (only if sequence listing and/or tables rel thereto are filed in computer readable form under Section 801(a or both in that form and on paper, under Section 801(a)(ii)): | ated a)(i), | | |
| 400 x = | i3 | | |
| fee per sheet Add amounts entered at i1, i2 and i3 and enter total at I | £656 I | | |
| (Applicants from certain States are entitled to a reduction of 75% of the international filing fee. Where the applicant is (or all applicants are) so entitled, the total to be entered at I is 25% of the international filing fee.) | | | |
| 4. FEE FOR PRIORITY DOCUMENT (if applicable) | P | | |
| 5. TOTAL FEES PAYABLE | £1789 TOTAL | | |
| MODE OF PAYMENT | | | |
| authorization to charge deposit account (see below) postal money order | cash Coupons | | |
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| AUTHORIZATION TO CHARGE (OR CREDIT) DEPOSIT ACCOUNTY (This mode of payment may not be available at all receiving Offices) | NT Receiving Office: RO/ GB | | |
| Authorization to charge the total fees indicated above. Deposit Account No.: | | | |
| (This check-box may be marked only if the conditions for deposit accounts of the receiving Office so permit) Authorization to charge any deficiency | Date: 22 November 2004 Name: Gail Shepherd | | |
| or credit any overpayment in the total fees indicated above. Authorization to charge the fee for priority document. | Signature: Call Stephero. | | |